

## ABSTRACT

A heat-resistant separator composed of a non-woven fabric of high-melting resin, 1 to 20  $\mu\text{m}$  in average fiber diameter, 5 to 300  $\text{g}/\text{m}^2$  in basis weight, 1 to 200  $\text{cc}/\text{cm}^2/\text{sec}$  in air permeability, and 0.01 to 1.0 mm in thickness, or a laminated heat-resistant separator composed of a laminate having a melt-blown, non-woven fabric layer of high-melting resin, 1 to 20  $\mu\text{m}$  in average fiber diameter, 5 to 300  $\text{g}/\text{m}^2$  in basis weight, 1 to 200  $\text{cc}/\text{cm}^2/\text{sec}$  in air permeability, and 0.01 to 1.0 mm in thickness is more resistant to heat, and hence safer, and is suitable for batteries and electrical double-layer capacitors serviceable at high temperature.